

# **Project Description**

## **Challenge Community Protection and Fuels Reduction (CPFR) Project**

Feather River Ranger District  
Plumas National Forest  
Yuba and Butte Counties, California

The USDA Forest Service, Plumas National Forest, desires to reduce the risk of wildfire and enhance firefighting safety on National Forest System (NFS) lands in the vicinity of the communities of Challenge and Woodleaf, California. The project area overlaps portions of Yuba and Butte Counties.

The foothill areas of the Feather River Ranger District are dotted with communities, many dating back to early mining and logging days of the mid to late 1800s. Land ownership is a complex mosaic of checkerboard private ownership, community areas and privately held mining claims with NFS lands intermixed. Forested areas are often densely vegetated Sierran mixed conifer forests with a high probability of burning hot and fast in the event of a wildfire. Some areas have been logged or received other vegetation treatments over the years.

The project area also encompasses the Pacific South West Research Station, Challenge Experimental Forest. Active since 1958 the 1,446 hectare site is designated for experimentation in silvicultural management of the young-growth forests at lower elevations on the west slope of the Sierra Nevada.

### **Location**

The project area is located approximately 15-18 miles east of Oroville, CA, in and around the community of Challenge. County Road 120 (La Porte Road) traverses the project area. The legal description of the project area is portions of:

Mount Diablo Meridian, California,  
T. 19 N., R 7 E., sections 4, 6, 8, 9, 16-21, 27-34; and  
T. 20 N., R 7 E., section 32.

### **Purpose of and Need for the Project**

The area is classified as wildland-urban interface (WUI) and, as such, has specific objectives as identified in the Sierra Nevada Forest Plan Amendment, 2004. Much of the proposed project area lies uphill from densely vegetated canyons inaccessible to treatment and firefighting efforts due to steep terrain, lack of safety zones and escape routes for firefighters, and a high probability of warm high winds that could further fan the fire.

Coordinated local efforts are underway on private lands to thin the forest and reduce fuels. These are generally facilitated by county fire safe councils of which the Feather River Ranger District is

an active partner. There is a need for the Forest Service to complement these efforts on public lands to do its part to help protect communities from wildfire, reduce the hazard of falling trees along roadways and provide safe areas for firefighters to take a stand and attempt to suppress future wildfires.

Specific purposes of the project are to:

- Remove hazard trees along roadways to ensure emergency escape routes, to make these areas safer, and increase roadside viewing distances for motorists, local residents, recreationists and other forest users;
- Thin vegetation to create defensible spaces along roads and ridgetops to create safe conditions for wildland firefighters; thinning would be more aggressive near roads and taper off at greater distances from the roads;
- Reduce ground, ladder and crown fuels by thinning trees and brush, thereby decreasing the likelihood of a severe wildfire spreading to private lands and structures;
- Reduce the risk or extent of, or increase the resilience to draught induced tree mortality and insect or disease infestation;
- Utilize removed material – timber and smaller trees – to create an economic benefit locally and generate partial funding for other service fuel reduction treatments; and
- Remove invasive plants from the project area.

## **Proposed Action**

In order to accomplish the objectives and meet the purpose and need for action described above, the Feather River Ranger District proposes a combination of vegetation treatment activities in the project area (approximately 8,146 acres). The project would be implemented as soon as is feasible after a decision is reached and should take one to three years to complete. Future maintenance involving the removal of excessive regrowth fire fuels – generally brush and small trees – in the project area would be necessary to retain the desired condition of this landscape and is considered in the scope of this project.

The following activities are proposed:

- Removing all hazard trees within the potential failure zone (generally 200 – 300 feet) of roads, powerlines, and structures;
- Thinning of trees less than 30 inches in diameter along road corridors within approximately 200 - 300 feet of the road resulting in 30-40 percent average canopy cover;
- Variable density thinning of trees beyond the road corridor buffer resulting in 40 to 50 percent average canopy cover; thinning would be thinning from below to remove small and medium sized trees first and thereby removing surface and ladder fuels, and retaining the largest healthiest trees;
- Areas identified as WUI defense zones and evacuation or firefighter safety road corridors would receive the more aggressive thinning treatments;
- California spotted owl protected activity centers (PACs) and home range core areas (HRCAs) would receive lighter treatments depending on site conditions;
- Commercial-sized timber resulting from the thinning would be offered for sale;

- Smaller material – trees – would be offered for sale as biomass, firewood or other small-log uses;
- Resulting slash and other woody debris would be piled and burned or chipped;
- In some areas, mastication equipment would be used to thin and chip brush and small trees onsite; areas unsuitable for mastication, such as owl PACS, would be treated by hand-cutting and piling;
- Underburning – prescribed fire – over much of the area is anticipated;
- Known and encountered non-native invasive plants – weeds – would be removed; all project activities would be done in accordance with best management practices for controlling invasive plants;
- Promote specific plant species useful in traditional cultural activities and controlling non-native invasive plants; and
- Reconstructing an interpretive trail along the historic Leach Railroad grade.

Some existing roads would be used as logging haul roads and/or access roads for equipment to complete project activities. Any temporary roads needed to perform project activities would be rehabilitated and/or returned to their original condition at the end of the project.

The Forest Service would use specific treatment methods to achieve the desired results for the project. The following list briefly describes the treatment methods proposed:

**Hazard Tree Removal:** Removal of trees deemed hazardous or dangerous based on Forest Service handbook standards for identifying such trees. This is generally based on tree heights and slope, or approximately 200 - 300 feet, from roads, powerlines, or structures.

**Mechanical Thinning (timber removal):** Removal of saw-timber sized trees (10 - 29.9 inches diameter breast height (dbh)) to thin the stand and remove ladder and canopy fuels. The goal is to increase ground-to-crown height, increase spacing between trees, and increase the spacing between tree crowns. An approximate percent canopy cover would be retained on average over all thinning units, with a 30% canopy cover target near identified roads transitioning to higher average canopy cover beyond road buffers. The purpose of the more open canopy cover standard near roads is to create safer conditions for firefighters to establish a fireline there. A fire will generally “lay down” to a ground fire when the flames cannot move from treetop to treetop.

The priority for thinning would be the removal of the smaller, suppressed, and intermediate-crown class trees (10-16 inches dbh), and removal of some co-dominant and dominant trees (>16 – 29.9 inches dbh) with crowns underneath and adjacent to healthy large trees. The preferred species for residual trees are shade-intolerant species where they exist. In order of preference, the shade-intolerant species are ponderosa pine, black oak, sugar pine, Douglas-fir, incense-cedar, and true fir.

Mechanical thinning generally utilizes wheeled or tracked processing machines that cut, buck and limb trees onsite. Often, a separate machine carries or drags the logs to the landing area where they are stacked and stored for transport to a mill.

**Biomass Removal:** Removal of surface and ladder fuels (trees 3 - 9.9 inches) following the guidelines stated above for mechanical thinning. Many ladder fuels fall into this size range.

Biomass removal allows the option for these trees to be sold for small log uses rather than cut, piled and burned on site.

**Mastication:** Removal of woody shrubs and trees using mechanical ground-based equipment to grind harvest residue or thin small trees. Shrubs and trees less than 10 inches dbh would be masticated, unless the trees are needed for the desired spacing. Most masticated trees would be less than 6 inches dbh.

**Cut and pile (grapple or hand pile) and/or underburn:** Removal of shrubs and trees up to 10 inches dbh by manually cutting using chainsaws. These ground and ladder fuels are removed from beneath overstory trees, and/or aggregations of small-diameter conifers or plantation trees. The spacing of residual conifers and black oaks would be generally 18-24 feet to allow retention of the healthiest, largest, and tallest conifers and black oaks and to avoid creating openings where future regrowth would be likely. The cut trees, shrubs, and existing slash would be piled and burned. Underburning is prescribed ground fire designed to reduce fuels on the ground.

The following table identifies the specific treatment(s) proposed within the project area. The table lists the most aggressive treatments that may be used in units. The environmental assessment (EA) will analyze this level of treatment. In the end, lighter treatments may be used in some units based on site conditions, resource considerations and access.

CHALLENGE TREATMENTS	Count of Stands	Sum of Stand Acres	Definitions for Treatments
EXP-FOR-MAST-HCHP	10	96.5	Experimental Forest mastication or hand-cut and hand-pile
EXP-FOR-NO-TRT	24	43.7	Experimental Forest Long Term Study Plots - no treatment prescribed
EXP-FOR-THIN	12	139.6	Experimental Forest thinning
EXP-FOR-THIN-PROG-SITE	6	28.9	Experimental Forest Progeny Site thinning
HAZ-TREE-REM-POWERLINES	2	31.0	Hazard tree removal - powerlines
HAZ-TREE-REM-THIN	17	869.8	Hazard tree removal and thinning
HAZ-TREE-REM-THIN-HRCA	17	679.2	Hazard tree removal and/or thinning - home range core area (California spotted owl)
HAZ-TREE-REM-THIN-PAC	4	279.4	Hazard tree removal and/or thinning - protected activity center (CASPO)
HAZ-TREE-REM-THIN-PAC-HRCA	9	600.0	Hazard tree removal thinning - protected activity center or home range core area
HCHP	31	257.2	Hand-cut, hand-pile and pile burn
HCHP-MAST	15	251.9	Hand-cut, hand-pile and pile burn (preferably) or masticate
MAST-HCHP	32	678.8	Masticate (preferably) or hand-cut, hand-pile and pile burn
NO-TRT	22	2,726.2	No treatment prescribed

PAC	35	686.9	Stand inside CASPO protected activity center
THIN-BIO-TRAC	40	489.6	Thinning and biomass removal - tractor
THIN-SKYLINE	15	287.2	Thinning - skyline
Grand Total	291	8,146.1	

Total treatment stands and acres prescribed are 245/5,376.2.

### **California Spotted Owl Interim Recommendations for Management:**

We will include and analyze an alternative consistent with the *Draft Interim Recommendations for the Management of California Spotted Owl Habitat on National Forest System Lands, 29 May 2015*. The recommended conservation measures provided in that document are based on the findings of the draft Conservation Assessment (May 2015), and represent a first approximation of actions available for consideration in the interim period between the development of the Conservation Assessment and implementation of a Conservation Strategy for the owl. These recommendations constitute a suite of measures that individually hold promise and support in scientific literature pertaining to owls and forest ecology, but they have not been field tested as a composite set of conservation measures. Thus, we cannot offer any certainty in terms of their benefits, only the potential for benefits based on the best available science in the form of the draft Conservation Assessment. Final interim recommendations may be issued once the draft Conservation Assessment is reviewed and finalized. The bulk of the work of reconciling the challenges that face the conservation of old forest ecosystems in the Sierra Nevada will fall to the Conservation Strategy.



